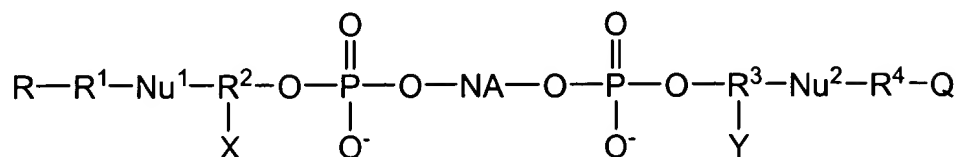


Listing of Claims:

1-31. (Canceled)

32. (Previously Presented) A compound having the formula



wherein,

NA is a nucleic acid chain comprising nucleic acid monomers selected from the group consisting of natural nucleic acids, modified nucleic acids and combinations thereof;

R¹, R², R³ and R⁴ are linker moieties independently selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

Nu¹ and Nu² are members independently selected from the group consisting of nucleotide residues and nucleoside residues;

R is a molecular energy transfer donor;

Q is a molecular energy acceptor; and

X and Y are the same or different and are non-nucleic acid stabilizing moieties that interact to bring R and Q into operative proximity, thereby enabling transfer of energy from R to Q.

33. (Previously Presented) The compound according to claim 32, wherein said molecular energy transfer donor is a fluorophore.

34. (Previously Presented) The compound according to claim 32, wherein said molecular energy acceptor is a fluorescence quencher.

1 35. (Previously Presented) The compound according to claim 32,
2 wherein X and Y are both hydrophobic moieties.

1 36. (Previously Presented) The compound according to claim 35,
2 wherein X and Y are members independently selected from the group consisting of
3 saturated hydrocarbons, unsaturated hydrocarbons, steroids, fatty acids, fatty alcohols and
4 hydrophobic peptides.

1 37. (Previously Presented) The compound according to claim 32,
2 wherein natural nucleic acids are members selected from the group consisting of
3 deoxyribonucleotides, ribonucleotides and combinations thereof.

1 38. (Previously Presented) The compound according to claim 37,
2 wherein said modified nucleic acids are peptide nucleic acids.

1 39. (Previously Presented) The compound according to claim 32,
2 wherein said nucleic acid monomers are joined by linkages that are members
3 independently selected from the group consisting of phosphodiesters and modified
4 phosphodiesters.

1 40. (Previously Presented) The compound according to claim 39,
2 wherein said modified phosphodiesters are members selected from the group consisting
3 of phosphorothioates and phosphoramidates.

1 41. (Previously Presented) The compound according to claim 32,
2 wherein said nucleic acid chain further comprises a hybridization enhancing moiety.

1 42. (Previously Presented) The compound according to claim 41,
2 wherein said hybridization enhancing moiety is a member selected from the group
3 consisting of intercalating agents, minor groove binders and modified exocyclic bases.

1 43. (Previously Presented) The compound according to claim 32,
2 wherein X and Y are independently attached to members selected from the group
3 consisting of a natural base of said nucleic acid chain, a modified base of said nucleic
4 acid chain, a 3'-hydroxyl group of said nucleic acid chain, a 5'-hydroxyl group of said
5 nucleic acid chain, a 2'-hydroxyl group of said nucleic acid chain, and a linkage joining
6 nucleic acid groups in said nucleic acid chain.

1 44. (Previously Presented) The compound according to claim 32,
2 wherein said compound is immobilized on a solid surface.

1 45. (Previously Presented) A method for amplifying a polynucleotide,
2 wherein a compound according to claim 32 is a primer in said method, said method
3 comprising:

- 4 (a) hybridizing said primer to said polynucleotide; and
5 (b) amplifying said polynucleotide.

1 46. (Previously Presented) The method according to claim 45,
2 wherein said amplifying is a member selected from the group consisting of polymerase
3 chain reaction (PCR), nucleic acid sequence based amplification (NASBA), strand
4 displacement amplification (SDA) and combinations thereof.

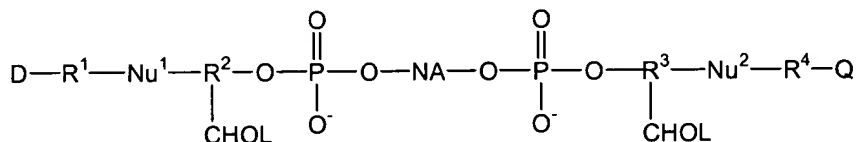
1 47. (Previously Presented) A method for detecting or quantitating a
2 nucleic acid, wherein the compound according to claim 32 is used as a probe, said
3 method comprising:

- 4 (a) hybridizing said compound to said nucleic acid; and
5 (b) detecting a change in fluorescence of said compound, thereby
6 detecting or quantitating said nucleic acid .

48. (Previously Presented) The method according to claim 47,
wherein said method comprises a member selected from the group consisting of 5'-
nuclease assay, rolling circle amplification and combinations thereof.

49. (Previously Presented) A kit for quantitating nucleic acid, said kit
comprising a compound according to claim 32.

50. (Previously Presented) A compound having the formula:



wherein,

CHOL is a cholesterol derivative;

R^1 , R^2 , R^3 and R^4 are linker moieties independently selected from the
group consisting of substituted or unsubstituted alkyl and
substituted or unsubstituted heteroalkyl;

Nu^1 and Nu^2 are members independently selected from the group
consisting of nucleotide residues and nucleoside residues;

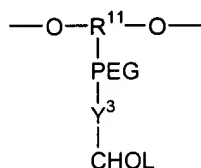
NA is a nucleic acid sequence;

D is a donor of light energy; and

Q is a quencher of light energy,

wherein the CHOL moieties interact to bring D and Q into operative
proximity, thereby enabling transfer of energy from D to Q.

51. (Previously Presented) The compound according to claim 50,
wherein R^1 and R^2 are independently selected and have structures according to the
formula:



wherein,

R^{11} is a member selected from the group consisting of substituted or unsubstituted alkyl and substituted or unsubstituted heteroalkyl;

PEG is polyethylene glycol;

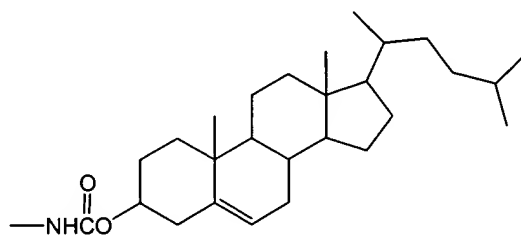
Y^3 is an organic functional group adjoining said PEG to said CHOL.

52. (Previously Presented) The compound according to claim 51, wherein said PEG has from about 2 to about 20 ethylene glycol subunits.

53. (Previously Presented) The compound according to claim 51 in which R^{11} is substituted or unsubstituted alkyl.

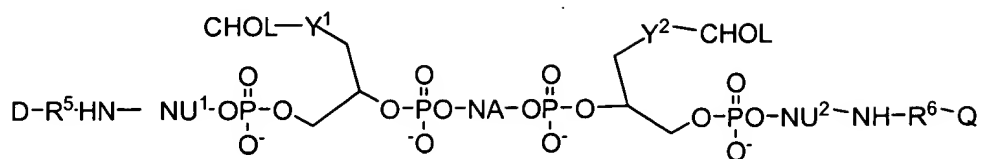
54. (Previously Presented) The compound according to claim 53, wherein R^{11} is C_1 - C_6 substituted or unsubstituted alkyl.

55. (Previously Presented) The compound according to claim 51, wherein Y^3 -CHOL has the structure:



56. (Previously Presented) The compound according to claim 50, wherein Nu^1 and Nu^2 are nucleotides having an exocyclic amine group to which $-R^1$ -D and $-R^4$ Q are attached, respectively.

57. (Previously Presented) A compound having the formula:



wherein,

NA is a nucleic acid sequence;

Nu¹ and Nu² are members independently selected from the group

consisting of nucleotide residues and nucleoside residues;

Y¹ and Y² are linking groups independently selected from the group

consisting of substituted or unsubstituted alkyl and substituted or

unsubstituted heteroalkyl;

R⁵ and R⁶ are linking groups independently selected from the group

consisting of substituted or unsubstituted alkyl and substituted or

unsubstituted heteroalkyl;

D is a donor of light energy; and

Q is a quencher of light energy,

wherein each CHOL interacts with the other CHOL to bring D and Q into

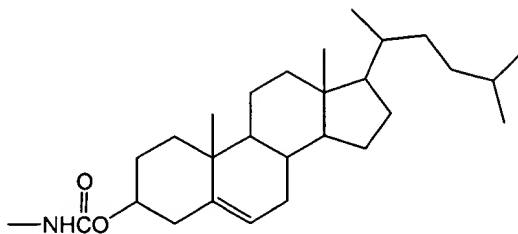
operative proximity, thereby enabling transfer of energy from D to Q.

58. (Previously Presented) The compound according to claim 57,
wherein Y¹ and Y² are members independently selected from substituted or unsubstituted
heteroalkyl.

59. (Previously Presented) The compound according to claim 58,
wherein Y¹ and Y² are polyethylene glycol.

60. (Previously Presented) The compound according to claim 59,
wherein said polyethylene glycol has from about 2 to about 20 ethylene glycol subunits.

61. (Previously Presented) The compound according to claim 57, wherein Y^1 -CHOL and Y^2 -CHOL have the structure:



62. (Previously Presented) The compound according to claim 57, wherein Nu^1 and Nu^2 are nucleotides having an exocyclic amine group to which $-R^5-D$ and $-R^6Q$ are attached, respectively.